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UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF PUBLIC ROADS  
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCrory, Chief

MONTHLY NEWS LETTER

WASHINGTON, D. C., JANUARY 20, 1928.

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: RECENTLY IT HAS BEEN NECESSARY FOR CERTAIN FIELD :  
: MEN TO MAKE EMERGENCY PURCHASES OF AUTOMOBILE TIRES. :  
: THIS CAN LARGELY BE AVOIDED BY MAKING A PERIODICAL IN- :  
: SPECTION OF TIRES AND KEEPING INFORMED OF THEIR CON- :  
: DITION. TIRES PURCHASED UNDER EMERGENCY ARE CONSIDER- :  
: ABLY MORE EXPENSIVE THAN THOSE SECURED UNDER REGULAR :  
: PROCEDURE. :  
: .....

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: THERE HAVE BEEN SENT OUT RECENTLY NEW FORMS AS :  
: FOLLOWS: :  
:           OLD FORM                                   NEW FORM :  
:           5       SUPERSEDED BY       1034 :  
:           4       "                    "       1012 :  
: :  
: WITH THIS LETTER IS BEING SENT A SUPPLY OF FORM 1013D, :  
: WHICH TAKES THE PLACE OF THE OLD GREEN FORM OF PAY :  
: ROLL REQUIRING A SALMON SHEET ATTACHED. IN SUBMITTING :  
: FORM 1034 IT SHOULD INVARIABLY BE ACCOMPANIED BY THE :  
: SLIP FOR THE CLAIMANTS RECORD. THIS WAS FORMERLY :  
: ATTACHED AS A COUPON ON FORM 5, BUT IS NOW SEPARATE. :  
: .....

FOR THE PURPOSE OF CONFERRING WITH R. B. GRAY AND INSPECTING THE  
WORK IN PROGRESS IN CONNECTION WITH MECHANICAL CORN BORER CONTROL AT  
TOLEDO, OHIO, MR. MCCRORY VISITED TOLEDO JANUARY 18-21.

IN LINE WITH THE POLICY OF INCREASING OUR FORCE TO HANDLE THE  
CORN BORER RESEARCH PROBLEMS, THE FOLLOWING APPOINTMENTS HAVE BEEN  
MADE:



1892

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R. M. MERRILL, OF MONTANA, ASSOCIATE AGRICULTURAL ENGINEER  
J. K. ALVIS, OF VIRGINIA, JUNIOR AGRICULTURAL ENGINEER

ALSO THE FOLLOWING APPOINTMENTS HAVE BEEN MADE TO TAKE EFFECT ON THE DATES INDICATED:

THAYER CLEAVER, KANSAS, JUNIOR AGRICULTURAL ENGINEER  
FEBRUARY 1.

O. L. GARVER, TRANSFERRED FROM WAR DEPARTMENT,  
SENIOR MECHANICAL DRAFTSMAN, JANUARY 23.

AN IMPORTANT MEETING ON CORN BORER CONTROL WAS HELD IN WASHINGTON JANUARY 3, AT WHICH TIME FEDERAL AND STATE AGENCIES ENGAGED IN CONTROL WORK PRESENTED THEIR PROGRAMS FOR THE COMING SEASON.

THE FOLLOWING IS ABSTRACTED FROM A MEMORANDUM ON THE IRRIGATION AND DRAINAGE CONFERENCE HELD AT BERKELEY, PREPARED BY R. L. PARSHALL, CHAIRMAN OF THE CONFERENCE:

THE WORK OF THE FIRST CONFERENCE HELD AT BERKELEY IN SEPTEMBER, 1925, DEVELOPED A VERY COMPREHENSIVE OUTLINE OF THE VARIOUS RELATIONS EXISTING IN THE FIELD OF RESEARCH OF THE IRRIGATION AND DRAINAGE INVESTIGATOR.

THE SECOND CONFERENCE OF THESE INVESTIGATORS HELD DECEMBER 28 - 30, 1927, WAS PRIMARILY FOR THE PURPOSE OF ORGANIZATION AND FURTHER BECAUSE OF THE NEED OF REVIEWING, IN CONFERENCE, THE WORK IN IRRIGATION AND DRAINAGE CARRIED BY THE MEN FROM THE SEVERAL WESTERN EXPERIMENT STATIONS AND THE U. S. DEPARTMENT OF AGRICULTURE, ALL DEALING WITH MORE OR LESS COMMON PROBLEMS IN THIS FIELD OF RESEARCH. ANOTHER VERY DECIDED ADVANTAGE TO BE GAINED IN THE ORGANIZATION OF SUCH A GROUP OF WORKERS IS THE PERSONAL CONTACT IN SUCH A CONFERENCE. MUCH GOOD IS DERIVED IN THE MORE COMPLETE AND BETTER UNDERSTANDING OF THE PROBLEMS INVOLVED WHEN REVIEWED BY THE LEADERS IN THESE VARIOUS SPECIAL LINES OF ACTIVITY. SUGGESTIONS AND CRITICISMS ARISING FROM DISCUSSION ARE THOUGHT TO BE A DISTINCT BENEFIT TO THOSE CARRYING ON THEIR RESEARCH WORK. PERTINENT AND USEFUL INFORMATION COMING FROM SUCH A CONFERENCE IS A WONDERFUL ASSET TO THE EXPERIMENTER IN BROADENING HIS VIEWPOINT IN RELATION TO HIS STUDIES.

THREE GENERAL TOPICS WERE DISCUSSED AT THIS LAST CONFERENCE, NAMELY: DUTY OF WATER, PUMPING FOR IRRIGATION AND DRAINAGE, AND INFORMATION ON THE SUBJECT OF IRRIGATION AND DRAINAGE FOR USE BY EXTENSION MEN. THESE SUBJECTS PROVED TO BE OF GREAT INTEREST AT THIS MEETING, ESPECIALLY THE TOPIC DUTY OF WATER. IT APPEARS THAT THE FORMER IDEAS UNDERLYING THIS SUBJECT MAY BE REPLACED BY A NEW CONCEPTION, AS EVIDENCED BY VERY RECENT WORK DONE BY THE INVESTIGATORS OF CALIFORNIA. THE DUTY OF WATER STUDIES BASED ON THE RATIO OF WATER USED TO YIELD OF CROP HAS LONG BEEN RECOGNIZED TO INVOLVE FACTORS WHICH ARE DIFFICULT, IF NOT IMPOSSIBLE FROM THE STAND-POINT OF CORRELATION. THE RECENT STUDIES WITH ORCHARDS PROMISE SUCCESS IN ESTABLISHING THE RELATION OF USE OF WATER BY THE TREES TO THE GROWING SEASON. IT MAY BE SHOWN LATER THAT THE USE OF WATER BY THE CROP IS INDEPENDENT OF THE TYPE OF SOIL, AND SHOULD THIS PROVE TO BE TRUE IT WILL BE RECOGNIZED AS AN OUTSTANDING ACHIEVEMENT.



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THE DIVISION OF AGRICULTURAL ENGINEERING, U. S. DEPARTMENT OF AGRICULTURE, SUBMITTED A PROJECT OUTLINE COVERING THIS SUBJECT. IT WAS REPORTED THAT THE SUBJECT OF DRAINAGE RECLAMATION BY PUMPING IS BEING GENERALLY ACCEPTED AS A PRACTICAL AND ECONOMIC MEANS OF SOLVING THIS PROBLEM. THE SUBJECT OF DRAINAGE INVESTIGATIONS INVITES EXTENDED STUDY, BECAUSE IT IS BELIEVED AT THIS TIME TO BE MORE ECONOMIC TO ACCOMPLISH RECLAMATION OF SEEPED AREAS THAN TO RECLAIM NEW LANDS BY IRRIGATION.

THE DISCUSSION OF EXPERIMENT STATION WORK IN IRRIGATION AND DRAINAGE AS BEING USEFUL TO THE EXTENSION SERVICE BROUGHT OUT FORCIBLY THE CALIFORNIA PLAN OF DISSEMINATING THIS INFORMATION. A SHORT SUMMARY OF THE RESULTS OF EXPERIMENTATION, PRESENTED IN AN ELEMENTARY FORM EASILY UNDERSTOOD AND VOID OF TECHNICAL MATTER, HAS BEEN FOUND TO BE EFFECTIVE. THE MERE DISTRIBUTION OF CIRCULARS AND BULLETINS TO FARMERS WITHOUT PERSONAL CONTACT BY THE EXTENSION SERVICE, DOES NOT SEEM TO FULLY ACCOMPLISH THE PURPOSE.

THE REPORT OF THE COMMITTEE APPOINTED TO STUDY THE FINANCIAL AND ECONOMIC CONDITION OF WARMSPRINGS IRRIGATION DISTRICT, OREGON, AND RECOMMEND A PLAN OF REHABILITATION, ON WHICH THIS DIVISION WAS REPRESENTED BY W. W. McLAUGHLIN AND P. A. EWING, WAS SUBMITTED TO THE OREGON STATE RECLAMATION COMMISSION AND WAS ADOPTED WITHOUT OBJECTION AT A MEETING OF STATE AND DISTRICT OFFICIALS AND BONDHOLDERS.

WORK WAS STARTED EARLY IN DECEMBER IN COOPERATION WITH THE CALIFORNIA DEPARTMENT OF PUBLIC WORKS, ON A STUDY OF THE PENETRATION OF WINTER RAINFALL AND ITS STORAGE IN THE SANTA ANA RIVER WATERSHED IN ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES. H. F. BLANEY IS IN CHARGE OF THE WORK, AND HAS BEEN ASSISTED BY A. A. YOUNG, C. A. TAYLOR, AND W. L. STOCKWELL.

J. G. SUTTON, WHO IS CONDUCTING THE INVESTIGATION ON DRAINAGE PUMPING PLANTS ALONG THE MISSISSIPPI AND ILLINOIS RIVERS, REPORTS THAT ONE OF THE LARGEST DRAINAGE DISTRICTS HAS BEEN AGAIN FLOODED AS THE RESULT OF A BREAK IN THEIR LEVEE, THIS BEING THE THIRD TIME THE DISTRICT HAS BEEN FLOODED WITHIN A LITTLE MORE THAN A YEAR.

D. G. MILLER HAS SUBMITTED A REPORT ENTITLED "EXPERIMENTAL AND MATHEMATICAL ANALYSES OF DRAIN TILE TESTING AND NEW TEST BEARING" FOR PUBLICATION BY THE UNIVERSITY OF MINNESOTA.

CHARLES A. BENNETT HAS COMPLETED A MANUSCRIPT FOR A FARMER'S BULLETIN ON COTTON DRYING BASED ON INVESTIGATIONS WHICH HE HAS BEEN MAKING DURING THE PAST YEAR. A TECHNICAL BULLETIN ON THE SAME SUBJECT IS NOW IN PREPARATION.

D. L. YARNELL HAS ABOUT COMPLETED A REPORT ON THE EFFECT OF BRIDGE PIERS ON THE FLOW OF WATER.

THE BUREAU OF BIOLOGICAL SURVEY HAS RECENTLY ISSUED, IN COOPERATION WITH THIS DIVISION, LEAFLET NO. 15 ON "RABBIT-HOUSE CONSTRUCTION."







B. S. CLAYTON, AFTER ASSISTING C. E. RAMSER FOR SEVERAL WEEKS HAS RETURNED TO HIS STATION AT CLEVELAND, MISS. AMONG OTHER THINGS MR. CLAYTON MADE FINAL CROSS SECTIONS OF THE ST. FRANCIS RIVER FLOODWAY, THE FLOOD RUN-OFF HAVING BEEN ALREADY MEASURED BY MR. RAMSER. THIS WORK WILL GIVE US SOME VERY VALUABLE DATA WITH REGARD TO FLOW THROUGH TIMBERED FLOODWAYS, A SUBJECT OF PECULIAR INTEREST AT THIS TIME IN CONNECTION WITH MISSISSIPPI RIVER CONTROL WORK.

W. V. HUKILL LEFT WASHINGTON DURING THE LAST DAYS OF DECEMBER WITH THE EXPECTATION OF SPENDING SEVERAL WEEKS ACCOMPANYING FRUIT SHIPMENTS EASTWARD FROM WASHINGTON AND OREGON. THE PURPOSE OF THESE TRIPS IS TO SECURE DATA AS TO THE EFFECTIVENESS OF EXPERIMENTAL TRANSPORTATION EQUIPMENT IN MOVING FRUITS THROUGH THE NORTHERN SECTIONS DURING EXTREMES OF COLD WEATHER.

F. E. STAEBNER LEFT WASHINGTON JANUARY 8, FOR A TWO WEEKS' INSPECTION OF RECENT SURFACE IRRIGATION INSTALLATIONS IN FLORIDA AND SOUTH CAROLINA. THE PURPOSE OF THIS STUDY IS TO PROCURE DATA FOR A REVISION OF FARMERS' BULLETIN 899, "SURFACE IRRIGATION FOR EASTERN FARMS."

G. R. BOYD IS ON A TRIP TO THE PACIFIC COAST DURING WHICH HE WILL VISIT BERKELEY, CALIF., CORVALLIS, OREG., TACOMA, WASH., BOZEMAN, MONT. AND ST. PAUL, MINN., FOR THE PURPOSE OF CONFERRING WITH OUR PYROTOL DISTRIBUTION AGENCIES, AND ARRANGING FOR THE CLOSING OF OPERATIONS AT THE DUPONT, WASH. PLANT.

ACTIVITIES IN PYROTOL DISTRIBUTION ARE RAPIDLY APPROACHING CONCLUSION. AT THE GIBBSTOWN PLANT THE LAST PYROTOL WAS CARTRIDGED DECEMBER 28. NOTHING REMAINS TO DO THERE BUT SHIP OUT STORED PYROTOL AS THE REMAINING ORDERS ARE RECEIVED. IT IS EXPECTED THAT THE PLANT AT DUPONT, WASH., WILL FINISH CARTRIDGING BY FEBRUARY 1. OUTSIDE OF THE PYROTOL ALLOTTED FOR AGRICULTURAL DISTRIBUTION, ALL OF THE REMAINING PYROTOL AT THAT PLANT WILL BE RESERVED FOR THE USE OF THE BUREAU. THE BARKSDALE PLANT WILL BE THE LAST TO FINISH. OPERATIONS THERE PROBABLY WILL EXTEND INTO MARCH. PYROTOL SHIPMENTS FOR DECEMBER WERE AS FOLLOWS:

BARKSDALE .....	90,050	LBS.
DU PONT .....	649,650	"
GIBBSTOWN .....	478,400	"

